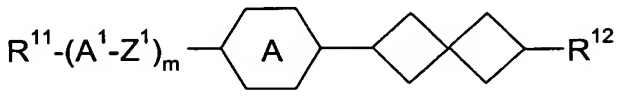
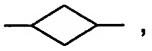
CLAIMS

1. A liquid-crystalline medium comprising a mixture of polar compounds of negative dielectric anisotropy, which comprises at least one compound of the formula I



I

in which

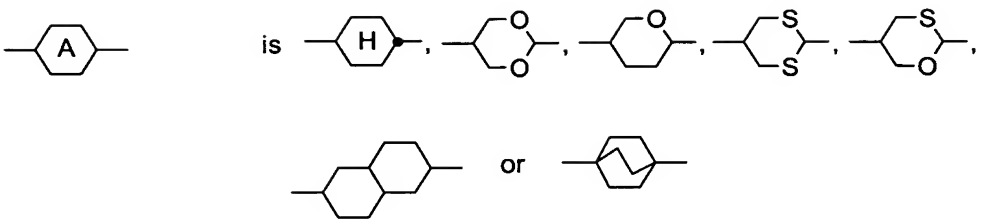
R^{11} is an alkyl or alkenyl radical having 1 to 15 carbon atoms which is unsubstituted, monosubstituted by CN or CF_3 or monosubstituted to perhalo-substituted by halogen, where one or more CH_2 groups in these radicals are optionally replaced by -O-, -S-,  , -C≡C-, -CO-O- or -O-CO- in such a way that O atoms are not linked directly to one another,

A^1 a) is a 1,4-cyclohexenylene or 1,4-cyclohexylene radical, in which one or two non-adjacent CH_2 groups are optionally replaced by -O- or -S-,

b) a 1,4-phenylene radical, in which one or two CH groups are optionally replaced by N,

c) a radical selected from the group consisting of piperidine-1,4-diyl, 1,4-bicyclo[2.2.2]octylene, naphthalene-2,6-diyl, decahydronaphthalene-2,6-diyl, 1,2,3,4-tetrahydronaphthalene-2,6-diyl, phenanthrene-2,7-diyl and fluorene-2,7-diyl,

where the radicals a), b) and c) are optionally monosubstituted or polysubstituted by halogen atoms,

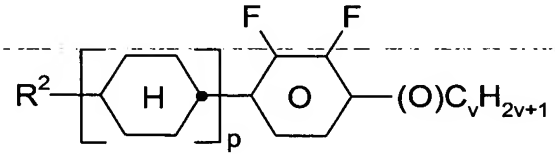


Z^1 is -CO-O-, -O-CO-, $-CF_2O-$, $-OCF_2-$, $-CH_2O-$, $-OCH_2-$, $-CH_2CH_2-$, $-(CH_2)_4-$, $-C_2F_4-$, $-CH_2CF_2-$, $-CF_2CH_2-$, -CH=CF-, -CF=CH-, -CF=CF-, -CH=CH-, -C≡C- or a single bond,

R^{12} is alkenyl having 2-7 carbon atoms, and

m is 0, 1 or 2.

2. A liquid-crystalline medium according to Claim 1, which additionally comprises one or more compounds of the formula II



II

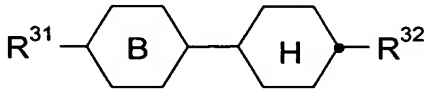
in which

R^2 is an alkyl or alkenyl radical having 1 to 15 carbon atoms which is unsubstituted, monosubstituted by CN or CF_3 or monosubstituted to perhalo-substituted by halogen, where one or more CH_2 groups in these radicals are optionally each independently of one another, replaced by -O-, -S-, -C≡C-, -CO-, -CO-O-, -O-CO- or -O-CO-O- in such a way that O atoms are not linked directly to one another,

p is 1 or 2, and

v is from 1 to 6.

3. A liquid-crystalline medium according to Claim 1, which additionally comprises one or more compounds of the formula III

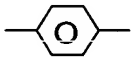


III

in which

R^{31} and R^{32} are each, independently of one another, a straight-chain alkyl, alkenyl, alkenyloxy or alkoxy radical having 1 to 12 carbon atoms, and

is



or

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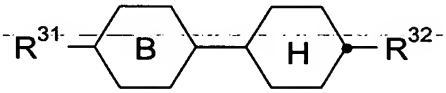
4. A liquid-crystalline medium according to Claim 2, which additionally comprises one or more compounds of the formula III



III

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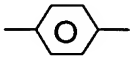
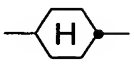
is



or



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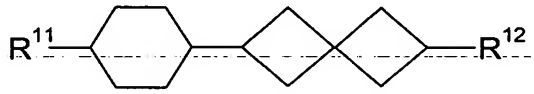
5. A liquid-crystalline medium according to Claim 1, which comprises two or more compounds of the formula I.

6. A liquid-crystalline medium according to Claim 1, wherein the proportion of compounds of the formula I in the mixture as a whole is at least 5% by weight.

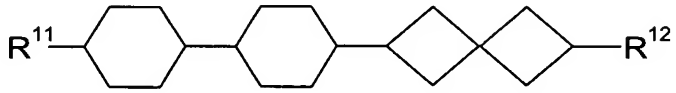
7. A liquid-crystalline medium according to Claim 2, wherein the proportion of compounds of the formula II in the mixture as a whole is at least 20% by weight.

8. A liquid-crystalline medium according to Claim 3, wherein the proportion of compounds of the formula III in the mixture as a whole is at least 5% by weight.

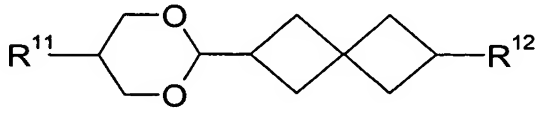
9. A liquid-crystalline medium according to Claim 1, which comprises at least one compound selected from those of the formulae I1 to I8:



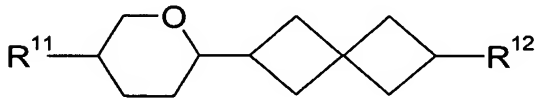
I1



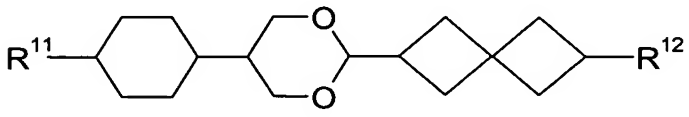
I2



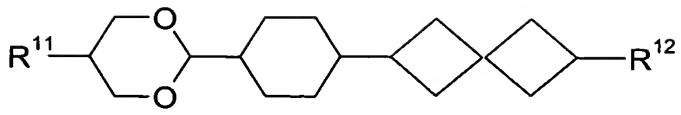
I3



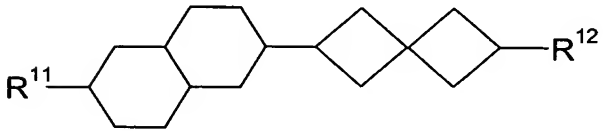
I4



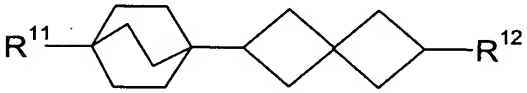
I5



I6



I7

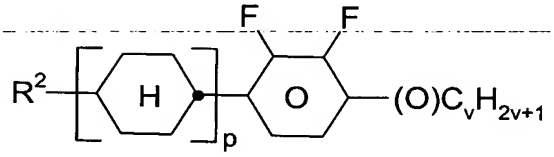


I8

in which

R^{11} and R^{12} are as defined.

10. A liquid-crystalline medium according to Claim 9, which additionally comprises one or more compounds of the formula II



II

in which

R^2 is an alkyl or alkenyl radical having 1 to 15 carbon atoms which is unsubstituted, monosubstituted by CN or CF_3 or monosubstituted to perhalo-substituted by halogen, where one or more CH_2 groups in these radicals are optionally each independently of one another, replaced by -O-, -S-, -C≡C-, -CO-, -CO-O-, -O-CO- or -O-CO-O- in such a way that O atoms are not linked directly to one another,

p is 1 or 2, and

v is from 1 to 6.

11. A liquid-crystalline medium according to Claim 9, which consists essentially of

5-30 % by weight of one or more compounds of the formula I1

and

20-70 % by weight of one or more compounds of the formula II.

12. An electro-optical display having active matrix addressing based on the ECB or IPS effect, which comprises, as dielectric, a liquid-crystalline medium according to Claim 1.

13. An electro-optical display having active matrix addressing based on the ECB or IPS effect, which comprises, as dielectric, a liquid-crystalline medium according to Claim 2.

14. An electro-optical display having active matrix addressing based on the ECB or IPS effect, which comprises, as dielectric, a liquid-crystalline medium according to Claim 3.

15. An electro-optical display having active matrix addressing based on the ECB or IPS effect, which comprises, as dielectric, a liquid-crystalline medium according to Claim 10.

16. An electro-optical display having active matrix addressing based on the ECB or IPS effect, which comprises, as dielectric, a liquid-crystalline medium according to Claim 11.